Remarks

The Office Action dated 31 December 2001 has been received and reviewed. Claims 4 and 5 having been canceled, claims 1, 6, 10, 12, and 17 having been amended, and claims 21-35 having been added, the pending claims are claims 1-3 and 6-35. Reconsideration and withdrawal of the rejections are respectfully requested.

Support for the Amended and New Claims

Support for the amendments to claims 1, 6, 10, 12, and 17 and new claims 21-35 can be found in the application as filed at, e.g., page 5, lines 10-15; page 6, line 25 to page 7, line 6; page 9, lines 9-15; etc.

The 35 U.S.C. §112, First Paragraph, Rejection

The Examiner rejected claims 1-20 under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, the Examiner asserts that "[t]he specification is deficient in any description of structure for providing an alert." Applicants respectfully traverse that assertion.

The specification describes "a detector 450 capable of detecting a change in the conductivity between the electrodes 420 and 430. The detector 450 preferably includes an electrical circuit capable of detecting the conductivity change between electrodes 420 and 430 through the film formed on the detection surface 440." Specification, page 9, lines 4-8. Later on that same page, the specification describes that "[t]he deposited film or coating is electrically conductive and, as a result, a change in the conductivity of the detection surface 440 between the electrodes 420 and 430 can be used to indicate the presence of ruthenium oxide gas in the area of the sensor 410, thereby alerting personnel in the area or those monitoring an unoccupied area of a potential hazard." In view of these disclosures, Applicants respectfully submit that the requirements of 35 U.S.C. § 112, first paragraph have been met.

To support a written description rejection under § 112, Applicants note that "reasons why a person skilled in the art at the time the application was filed would not have recognized that the inventor was in possession of the invention as claimed" must be provided. MPEP § 2163 (III)(A), p. 2100-166 (August 2001). No such reasons have been provided in support of this rejection.

As a result, Applicants respectfully request reconsideration and withdrawal of this rejection or, in the alternative, a non-final rejection providing reasons as to why this requirement is not met (to which Applicants can respond with appropriate arguments and/or evidence).

The 35 U.S.C. §102(b) and § 103(a) Rejections

Claims 1, 6, 9-10, 12, 15-17, and 19-20 under 35 U.S.C. §102(b) were rejected as being anticipated by Hacman (GB 1,151,482) or N.V. Philips (FR 1576658). Claims 2-5, 7, 8, 11, 13, 14, and 18 under 35 U.S.C. §103(a) as unpatentable over Hacman or N.V. Philips as applied to claims 1, 6, 10, 12 and 17, and further in view of Arai (JP 2-293644 or JP 3-48748).

Applicants note that method claims 1, 6 and 10 have been amended to recite selection of detection surfaces on which the gas phase material preferentially deposits. The sensor claims 12 and 17 have been amended similarly. Further, all claims now recite the detection of gas phase materials comprising ruthenium.

Applicants are submitting herewith translations of the foreign language references (N.V. Philips (FR 1576658), Arai (JP 2-293644), and Arai (JP 3-48748)). The cited references, taken alone or in combination, teach or suggest methods of detecting gas phase materials comprising ruthenium by selecting a detection surface on which the gas phase material preferentially deposits and measuring the conductivity of the thus-formed film.

In fact, the Arai references teach away from measuring electrical conductivity, relying instead on measuring a weight change on an oscillating detector.

Further, Applicants traverse the assertions made in paragraph 6 of the Office Action. For example, Applicants traverse the assertion that the Arai references teach that the materials deposited on the surface of the oscillating detector would be electrically conductive.

Applicants respectfully request reconsideration and withdrawal of these rejections in view of the above.

Summary

It is respectfully submitted that pending claims 1-3 and 6-35 are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicant's Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted for

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APPENDIX A - SPECIFICATION/CLAIM AMENDMENTS INCLUDING NOTATIONS TO INDICATE CHANGES MADE
Serial No.: 09/388,286
Docket No.: 150.0101 0101

Amendments to the following are indicated by underlining what has been added and bracketing what has been deleted. Additionally, all amendments are in bold typeface.

In the Claims

For convenience, all of pending claims 1-3 and 6-31 are shown below.

1. **(Twice Amended)** A method of detecting a gas phase material comprising:

providing a sensor comprising first and second electrodes, a detection surface extending between the first electrode and the second electrode, and a detector operatively connected to the first and second electrodes;

exposing the detection surface to **[the]** **a** gas phase material **comprising ruthenium**, wherein an electrically conductive film of gas phase material forms on the detection surface between the first and second electrodes;

detecting the gas phase material from a change in conductivity between the first and second electrodes with the detector; and

generating an alert based on the detection of the gas phase material**;**

wherein the detection surface is selected such that the gas phase material preferentially deposits on the detection surface.

2. A method according to claim 1, wherein the gas phase material comprises ruthenium.

3. A method according to claim 1, wherein the gas phase material comprises ruthenium tetraoxide.

6. **(Twice Amended)** A method of detecting a gas phase material comprising:

providing a sensor comprising first and second electrodes, a detection surface extending between the first electrode and the second electrode, and a detector operatively connected to the first and second electrodes, wherein the detection surface is not electrically conductive;

exposing the sensor to **[the]** **a** gas phase material **comprising ruthenium**, wherein an electrically conductive film of the gas phase material forms on the detection surface between the first and second electrodes;

detecting electrical conductivity of the electrically conductive film between the first and second electrodes with the detector; and

generating an alert based on the detection of the electrical conductivity of the electrically conductive film;

wherein the detection surface is selected such that the gas phase material preferentially deposits on the detection surface.

7. A method according to claim 6, wherein the detection surface comprises a polymer.

8. A method according to claim 6, wherein the detection surface comprises polypropylene.

9. A method according to claim 6, wherein the detection surface comprises glass.

10. **(Twice Amended)** A method of detecting a gas phase material comprising:

providing a sensor comprising first and second electrodes, a detection surface extending between the first electrode and the second electrode, and a detector operatively connected to the first and second electrodes;

heating the detection surface above ambient temperature;

exposing the detection surface to **[the]** **a** gas phase material **comprising ruthenium**, wherein an electrically conductive film **[of the gas phase material]** **comprising ruthenium** forms on the detection surface between the first and second electrodes;

detecting the gas phase material from a change in conductivity between the first and second electrodes with the detector; and

generating an alert based on the detection of the gas phase material;

wherein the detection surface is selected such that the gas phase material comprising ruthenium preferentially deposits on the detection surface.

11. A method according to claim 10, wherein the gas phase material comprises ruthenium, and further wherein heating the detection surface comprises heating the detection surface up to about 100°C or less.

12. **(Twice Amended)** A sensor for detecting a gas phase material **comprising ruthenium** in an environment, the detector comprising:

first and second electrodes;

a detection surface extending between the first electrode and the second electrode, **wherein the detection surface comprises a material on which the gas phase material comprising ruthenium preferentially deposits**; and

a detector **measuring electrical conductivity between [operatively connected to]** the first and second electrodes, where the detector generates an alert when **[a film of the gas phase material in the environment] an electrically conductive film comprising ruthenium** forms on the detection surface **between the first and second electrodes.**

13. A sensor according to claim 12, wherein the detection surface comprises a polymer.

14. A sensor according to claim 12, wherein the detection surface comprises polypropylene.

15. A sensor according to claim 12, wherein the detection surface comprises glass.

16. A sensor according to claim 12, wherein the detector comprises an electronic circuit capable of detecting a change in electrical conductivity between the first and second electrodes.

17. **(Twice Amended)** A sensor for detecting a gas phase material **comprising ruthenium** in an environment, the detector comprising:

first and second electrodes;

a detection surface extending between the first electrode and the second electrode, **wherein the detection surface comprises a material on which the gas phase material comprising ruthenium preferentially deposits**;

a heater capable of providing thermal energy to the detection surface; and

a detector **measuring electrical conductivity between [operatively connected to]** the first and second electrodes, where the detector generates an alert when **[a film of the gas phase material in the environment] an electrically conductive film comprising ruthenium** forms on the detection surface **between the first and second electrodes**.

18. A sensor according to claim 17, wherein the detection surface comprises a polymer.

19. A sensor according to claim 17, wherein the detection surface comprises glass.

20. A sensor according to claim 12, wherein the detector comprises an electronic circuit capable of detecting a change in electrical conductivity between the first and second electrodes.

21. **(New)** A method according to claim 1, wherein selection of the detection surface comprises selecting a detection surface comprising polypropylene.

22. **(New)** A method according to claim 1, wherein selection of the detection surface comprises selecting a detection surface having a selected morphology.

23. **(New)** A method according to claim 22, wherein the selected morphology is smooth.

24. **(New)** A method according to claim 22, wherein the selected morphology is structured.

25. **(New)** A method according to claim 6, wherein selection of the detection surface comprises selecting a detection surface having a selected morphology.

26. **(New)** A method according to claim 25, wherein the selected morphology is smooth.

27. **(New)** A method according to claim 25, wherein the selected morphology is structured.

28. **(New)** A method according to claim 10, wherein selection of the detection surface comprises selecting a detection surface comprising polypropylene.

29. **(New)** A method according to claim 10, wherein selection of the detection surface comprises selecting a detection surface having a selected morphology.

30. **(New)** A method according to claim 29, wherein the selected morphology is smooth.

31. **(New)** A method according to claim 29, wherein the selected morphology is structured.

32. **(New)** A sensor according to claim 12, wherein the detection surface is smooth.

33. **(New)** A sensor according to claim 12, wherein the detection surface is structured.

34. **(New)** A sensor according to claim 17, wherein the detection surface is smooth.

35. **(New)** A sensor according to claim 17, wherein the detection surface is structured.